

ABSTRACT OF THE DISCLOSURE

The semiconductor device fabrication method comprises the step of forming a first insulation film 14 over a semiconductor substrate 10; the step of forming a semiconductor film 16 over the first insulation film 14; the step of forming a resist film 20 over the semiconductor film 16; the step of forming openings 21 in the resist film 20; the step of etching the semiconductor film 16 with the resist film 20 as the mask; the step of etching the first insulation film 14 with the semiconductor film 16 as the mask; and the step of etching the semiconductor substrate 10 with the first insulation film 14 as the mask to form trenches 22 in the semiconductor substrate 10. Silicon nitride film is patterned, using a mask of polysilicon film, whereby the silicon nitride film can be etched with high selectivity to the polysilicon film. Accordingly, a good pattern of the silicon nitride film can be formed. Even when micronized trenches are formed in a semiconductor substrate with silicon nitride film as a mask, the trenches can be formed in a required configuration. Thus, good element isolation regions can be formed, further micronized.